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(54) **SCANNING DEPTH ENGINE**

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(58) **Field of Classification Search**

CPC G01S 3/08

See application file for complete search history.

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(57) **ABSTRACT**

Mapping apparatus includes a transmitter, which emits a beam comprising pulses of light, and a scanner, which is configured to scan the beam, within a predefined scan range, over a scene. A receiver receives the light reflected from the scene and to generate an output indicative of a time of flight of the pulses to and from points in the scene. A processor is coupled to control the scanner so as to cause the beam to scan over a selected window within the scan range and to process the output of the receiver so as to generate a 3D map of a part of the scene that is within the selected window.

45 Claims, 14 Drawing Sheets